

PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AND THE INSTALLATION OF APS/CPS PEDESTRIAN EQUIPMENT AT THE INTERSECTION OF MD 214 (CENTRAL AVE) AT THE SIX FLAGS AMUSEMENT PARK DRIVEWAY IN PRINCE GEORGE'S COUNTY. THE PEDESTRIAN CROSSING ACROSS MD 214 WILL BE RELOCATED TO THE EAST SIDE OF THE INTERSECTION. MD 214 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

II. INTERSECTION OPERATION

THIS INTERSECTION OPERATES IN A NEMA FOUR-PHASE FULLY-TRAFFIC-ACTUATED MODE. THERE IS AN EXCLUSIVE LEFT-TURN PHASE FOR EASTBOUND MD 214. THE THROUGH MOVEMENTS FOR THE EASTBOUND AND WESTBOUND APPROACHES OF THE INTERSECTION OPERATE CONCURRENTLY. THERE IS AN EXCLUSIVE LEFT-TURN PHASE FOR SOUTHBOUND SIX FLAGS DRIVEWAY. AN ALTERNATE PEDESTRIAN PHASE ACROSS THE EAST LEG OF THE INTERSECTION IS PROVIDED.

III. PEDESTRIAN OPERATION

NAVIGATOR AUDIBLE PEDESTRIAN PUSHBUTTONS TO CROSS THE EAST LEG OF THE INTERSECTION ARE TO BE PROVIDED. WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING MESSAGE:

EAST: "WAIT TO CROSS CENTRAL AT SIX FLAGS, WAIT."

WHEN THE WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTACT PERSONS

THE CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

DISTRICT 3

MR. VENU NEMANI
ASSISTANT DISTRICT ENGINEER - TRAFFIC (PG)
301-513-7404

MR. VICTOR GRAFTON
DISTRICT ENGINEER - UTILITIES
301-513-7350

MR. DUANE BERNARD
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
301-513-7385

MR. THOMAS FOUNTAIN
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
301-513-7304

BALTIMORE GAS AND ELECTRIC

GAS AND ELECTRIC NEW BUSINESS DEPT.
410-850-4620

MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING
STANDARD PLATES FOR TRAFFIC CONTROL: MD 104.03-11, MD 104.04-13 THROUGH MD 104.04-16.

EQUIPMENT LIST

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
900000	37	SF	SHEET ALUMINUM GROUND MOUNTED SIGN W11-2 (36"x36"), 3 EA. 27 SF W16-7p(L) (24"x12"), 1 EA. 2 SF W16-7p(R) (24"x12"), 1 EA. 2 SF W13-4(1) (36"x24"), 1 EA. 6 SF
900000	49	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN R3-5(L) (30"x36"), 2 EA. 15 SF M1-5(6) (48"x72"), 1 EA. 24 SF D-3(1) (72"x16"), 1 EA. 8 SF R10-3(1) (9"x16"), 2 EA. 2 SF
900000	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM
900000	1	EA	UPS EQUIPMENT FOR "S" CABINET
900000	1	EA	4 CHANNEL DETECTOR AMPLIFIER


B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	20	CY	CLASS 2 EXCAVATION
203030	2	CY	TEST PIT EXCAVATION
585621	330	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	50	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	450	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	60	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	50	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	515	SF	5 INCH CONCRETE SIDEWALK
655120	70	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
660482	50	LF	TRAFFIC BARRIER W BEAM USING 6 FOOT POST
661540	1	EA	TYPE K TRAFFIC BARRIER END TREATMENT, ANY OPTION
662325	38	LF	REMOVAL AND DISPOSAL OF EXISTING TRAFFIC BARRIER W BEAM
704345	54	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	54	SY	TURFGRASS SOD ESTABLISHMENT
800000	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
800000	3	EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED ROADWAY LUMINAIRE
800000	2	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	2	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	2	EA	IP-BASED VIDEO DETECTION CAMERA & ANY LENGTH LEAD-IN CABLE



B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR (CONTINUED)


ITEM NO.	QUANTITY	UNIT	DESCRIPTION
800000	2	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	MAST ARM POLE & 38' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	MAST ARM POLE & 50' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	MAST ARM POLE & 70' MAST ARM ANY 'T' DIMENSION, FOUNDATION & GROUND ROD
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	4	EA	NONINVASIVE DETECTOR WITH ANY LENGTH LEAD-IN CABLE UP TO 1000'
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	700	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B.W.G) TYPE TC
800000	300	LF	DISCONNECT, PULL-BACK & REROUTE CABLES
800000	370	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED OR SLOTTED
800000	500	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
800000	48	LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
800000	86	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
802501	790	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	40	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
811001	8	EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
860284	30	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	200	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861107	290	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
861108	1375	LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)













PHASE 1 & 6
1 & 6 CHANGE
PHASE 2 & 6
2 & 6 CHANGE
PHASE 4
4 CHANGE
PHASE 5 & 4

PHASING CHART

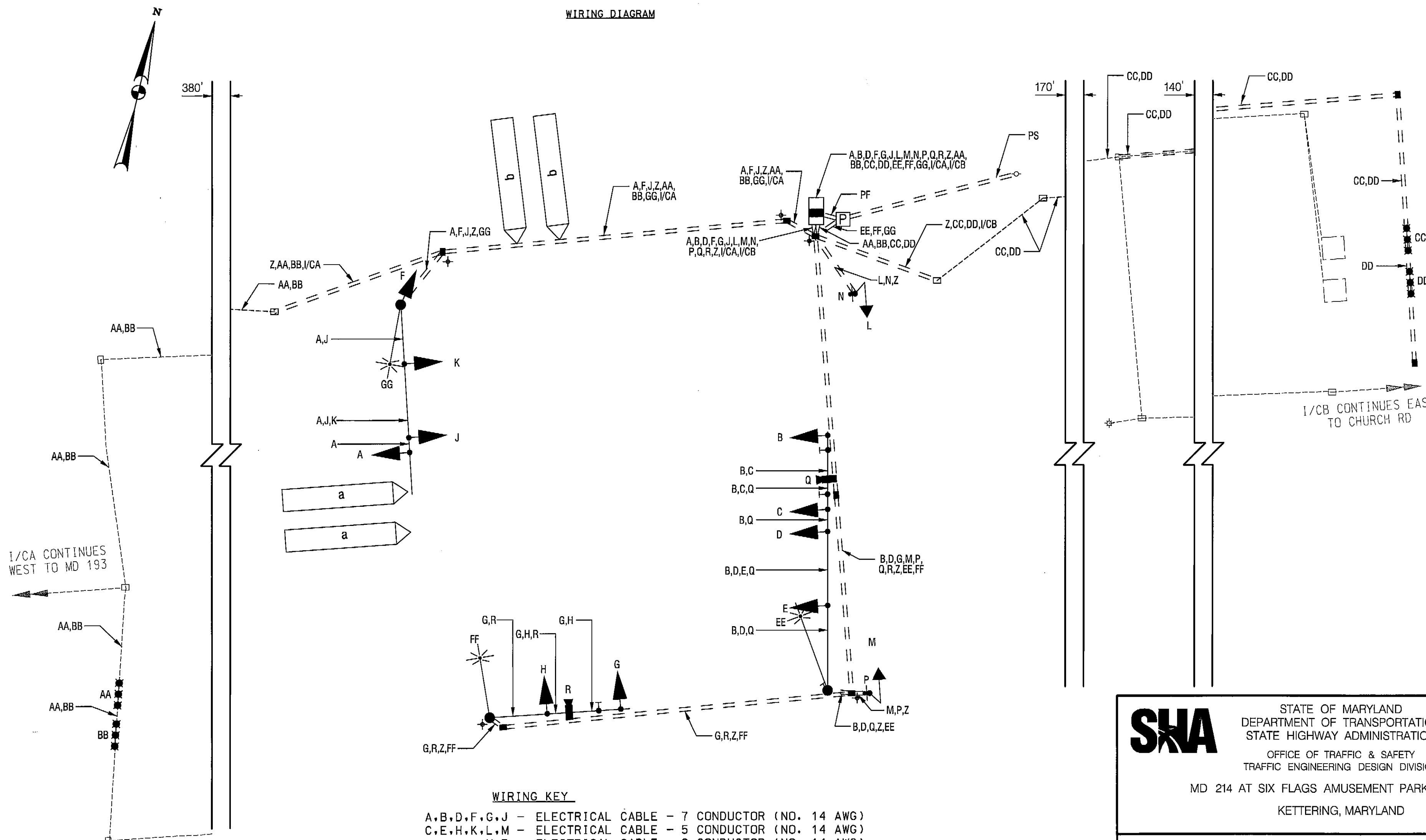
1 2 3 4 5 6 7 8 9 10 11 12



PHASE 1 & 6	←G←	←G←	←G←	G	G	R	R	R	R	R	DW	DW	
1 & 6 CHANGE	←Y←	←Y←	←Y←	G	G	R	R	R	R	R	DW	DW	
PHASE 2 & 6	←R←	←R←	←R←	G	G	G	G	R	R	R	DW	DW	
2 & 6 CHANGE	←R←	←R←	←R←	Y	Y	Y	Y	R	R	R	DW	DW	
PHASE 4	←R←	←R←	←R←	R	R	R	R	G	G	G	DW	DW	
4 CHANGE	←R←	←R←	←R←	R	R	R	R	Y	Y	Y	DW	DW	
PHASE ALT 4	←R←	←R←	←R←	R	R	R	R	G	G	G	WK	WK	
PED CLEARANCE	←R←	←R←	←R←	R	R	R	R	G	G	G	FLDW	FLDW	
ALT 4 CHANGE	←R←	←R←	←R←	R	R	R	R	Y	Y	Y	DW	DW	
FLASHING OPERATION	FL←R	FL←R	FL←R	FLY	FLY	FLR	FLY	FLR	FLR	FLR	DARK	DARK	

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING DIAGRAM



WIRING KEY

A,B,D,F,G,J - ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
C,E,H,K,L,M - ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
N,P - ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
Q - VIDEO DETECTION CONTROL CABLE
Z - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
AA,BB,CC,DD - NONINVASIVE DETECTOR LEAD-IN
EE,FF,GG - ELECTRICAL CABLE - 3 CONDUCTOR (NO. 12 AWG) (B,W,G) TYPE TC
HH - ELECTRICAL CABLE, 3-1-CONDUCTOR NO. 8 AWG-THHN/THWN
I/CA,I/CB - EXISTING INTERCONNECT CABLE (PULL BACK AND REROUTE)
J - POWER SERVICE UNDERGROUND 3 WIRE 1 CONDUCTOR, NO. 2/0 AWG-THHN-
(PROVIDED BY BGE)
+ - GROUND ROD

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 214 AT SIX FLAGS AMUSEMENT PARK D
KETTERING, MARYLAND

GENERAL INFORMATION SHEET

SCALE NTS ADVERTISED DATE 05/2013 CONTRACT NO. XY1515185

DESIGNED BY	AMHJE	COUNTY	PRINCE GEORGE'S
DRAWN BY	JE	LOGMILE	16021407.92
CHECKED BY	JFL	TIMS NO.	L811
F.A.P. NO.		TOD NO.	

TS NO. 2361C-GI	DRAWING SG-3 OF 3	SHEET NO. 9 OF 9
-----------------	--------------------------	------------------